



THE NEXUS GUIDE TO- MIND ENHANCEMENT TECHNOLOGIES

Build Your Own Recession-Fighting "Guerilla Goggles"

Those of us who have been tempted by the glittering alchemy of Light and Sound "Mind Machines" could be a little confused by now. Only one thing seems consistent. Each purveyor of electronic good times promotes their newly imported product as "THE best". Well, the one you can build from this article definitely isn't the best ... but it is the CHEAPEST! For about \$5-, if you have an old pair of sunnies and a soda can.

SEEING THE LIGHT

Some unbridled "futants" spend over 200 times as much for extra sound effects, frequency readouts or automation. If you're REALLY serious, it is worth the expense ... and in all fairness, this complexity is costly to manufacture. But it's icing on the cake, not the underlying principle. To help with your decision, we will list the performance options available, using our home-made optical stimulator as a point of departure. After all, the one thing they all have in common is flashing lights, fitted to anything from ski goggles to wrap-around safety glasses.

But first our cybernetic psychologist, Dr. Anne Droid, wants to say that the brain's electrical activity can be tuned to any rhythm you want by applying pulsed energy through the senses. This is most easily done with LIGHTS and

SOUND. What results is the "frequency following response", also termed "entrainment".

Depending on the speed of stimulation introduced, the mind will translate it into a corresponding level of subjective awareness. Commercial mind machines generate a synchronous audio/visual output, variable in rate from about 1 to 30 cycles per second. Within this "ELF" range lie the biological triggering mechanisms for nearly all our moods and inner resources. There is some evidence that repeated use actually opens up NEW neural pathways, or those not turned on by ordinary influences in the environment.

CONSUMER REPORT

Meanwhile, back at the lab, we are dissecting a representative sampling of this year's high-tech gadgetry, and putting their common features into separate smoldering piles. We'll leave it to you to correlate this raw data with your actual needs, and specific brand names. Here's what their basic differences look like to the informed researcher.



OPTICAL STIMULATION

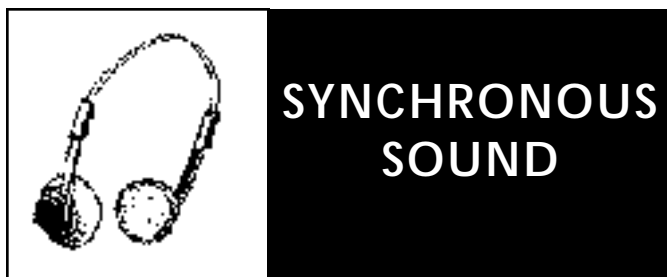
Source: miniature incandescent or solid state Light Emitting Diodes (LED's). The former boasts "full spectrum", but red, typically the colour chosen for the latter, is

a more penetrative nerve activator. Green is occasionally used, but this is more colour therapy. LED's come in a wide range of brightness. Dimmer controls are relevant to relaxation, but maximum light creates the stunning internal imagery, and kaliedoscopic patterns that pull your attention inside. Some models can flash alternate left and right eye, theoretically accessing each brain hemisphere function in sequence, as opposed to merging them. More uncommon, is a cluster of LED's that "rotate", expand or contract. Transparent lenses allow you to see past the lamps, an advantage for reading retention, or superimposing a nostalgic psychedelic flicker on the outside world. A few have an infrared emitter over the forehead, presumably to awaken the fabled "third eye", doorway to inner space. Activating waveform: most are a simple, square on/off pulse. these are not single frequencies, in that all odd harmonics of the rate selected are present. A pure rising and falling wave, with a higher proportion of "on" to "off" time, is preferable to anyone but a computer, and now used exclusively in our devices.

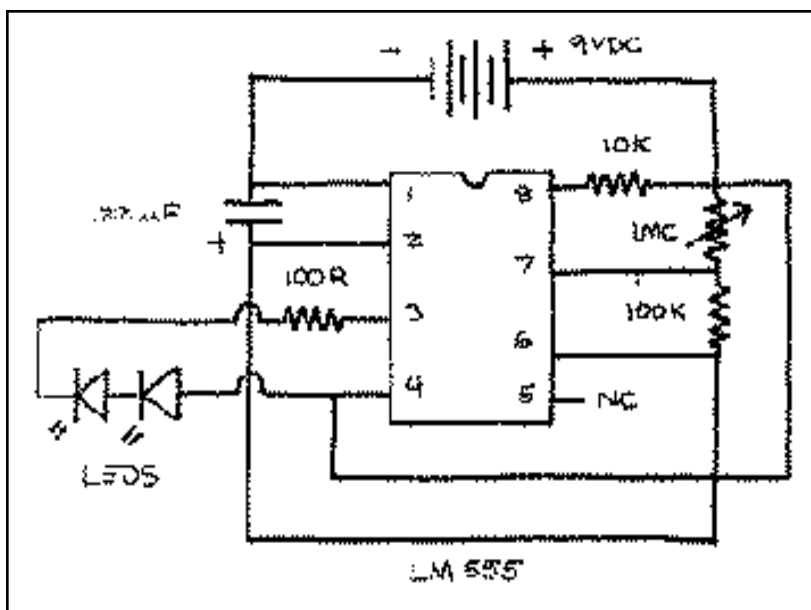


capability and unlimited availability of sounds. Secondly, the impact of music, recorded affirmations, or guided "vision quests" is enhanced by synergetic light patterns evoked on the screen of the mind.

This is accomplished intuitively by the user, according to the inner sensations preferred, or with reference to a numeric readout. The latter is often associated with digital circuitry, which may have a memory chip enabling a session of migrating frequencies to be entered on a keypad, stored, and called up at a later date. Some systems are sold with factory-set programs for relaxation, creativity, problem solving, etc. Here's where individual choice and budget come in. If the object is self-exploration, an operator who is guided by experiential landmarks within the "mindscape" itself, can achieve more fluid response by the turn of a single knob ... calibrated or not. These are specific patterns of light and colour that always occur at the same frequency. This approach is becoming more learnable, as devices with increasingly potent sensory interfaces enter the marketplace. the only rationale for "computerised", push button gear is its self-contained, predefinable, time-variant functions. Its drawbacks include incremented rather than smooth pulse rate transitions, and restricted improvising once a program is started. If accurate calibration is wanted for systematic research, any in-built metering, and the circuitry it monitors, should have a resolution of at least



Applied through ordinary stereo headphones in, or sometimes 180 degrees out of, phase with optical pulses to reinforce the entrainment effect. This may be a repetitive tone, sometimes with a pitch control and volume you can adjust to your liking. Synthesized "white-noise", similar to wind or rushing water, is also commonly used for its universal appeal and awareness-captivating properties. Heartbeats, "lasers", tropical birds, etc are available at a price. Some leading-edge products now offer the BINAURAL, or "holophonic", effect. The user "hears" a compelling internal beat, derived WITHIN the brain itself from separate audio tones fed to each ear. These are tuned by the operator to differ from each other by the exact psychoactive frequency desired. (See Nexus Vol.2 #1) for a full description. The visual output of certain goggles can also be modulated in tempo with an external audio source, such as a cassette player. This is useful in two instances. Firstly, the tape may contain lamp-triggering pulses of any sound desired, that shift in repetition rate over its duration, constituting a graduated "journey" to a certain level of awareness and back. This has the same effect as expensive computer sequencing, but is better adapted to implementing new trends, with its stereo/holophonic



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1/10th cps, if not 1/100th. The latter would be required for replicating the popularised Schumann atmospheric resonance of 7.83 cps., or new effects you may wish to document at precise, mind-altering "window" settings.

Well, those are the basics. A few diverging contenders throw in a supplementary magnetic field (see Nexus Vol.2 #2) and/or direct electrical skin stimulation. The latter is effective, to the extent of being harsh if consideration is not given to the actual wave SHAPE introduced. It is the basis of some tape activated brain "therapy" units that have no light or sound. Trials are now being done with focussed external potentials, or "scalar waves", which are far more biologically reactive, and may be applied at a distance. A facility to plug in two sets of goggles and headphones is ideal for shared exploits, counselling and telepathy experiments. While portable goggles seem handy, limits on battery life favour either simplicity, or power-conserving digitised circuits that talk in rectilinear pulses, instead of more organic waveforms. Some researchers are looking to reshape the latter, thereby adding a secondary "feel", or EMOTIONAL component. In other laboratories, an exciting new generation of mind machines is emerging. These sense the total mental AND physical response to applied stimulation, and modify each deepening step of the entrainment process accordingly, supported by a computer generated VIRTUAL REALITY. The subject interacts with this changing landscape in 3D through a stereoscopic video eyeshield, and motion sensors attached to a full body suit. Its fluid topography mirrors the inner dynamics of the mind ... and the mind responds instantaneously to its projected alternate reality. The interplay accelerates until there is no separation.

INNER CITY

A few preliminary suggestions for using any recreational mind machine. Please refrain, if you are epileptic, nervously disordered, on medication, wearing a heart pace-maker, or have just seen the movie "Altered States". Never twiddle the knob back and forth. This may irritate the mind, which is unable to track the rapid changes. Keep your eyes closed and to avoid strain look "through", rather than "at", the internal imagery produced. Always start a session at a relatively high rate of pulsation and proceed SLOWLY downward. For efficient brainwave capture to occur, the applied stimulation rate must at some initiatory stage pass through that of your pre-existing level of awareness. Allow a suitable rest period afterward, before engaging in any demanding activities. If unwanted effects are ever encountered, discontinue use immediately. All information in this article is speculative, and subject to verification by the researcher at his or her own risk. Prospective buyers of mind machines seeking an update on the latest developments, are invited to contact the author through Nexus Magazine. I think that covers everything.

The accompanying CIRCUIT DIAGRAM on the opposite page shows a simple pulse generator for your "guerrilla goggles". The IMC potentiometer is wired in reverse. Trim its range with the 100K resistor, if required. You can drop

the whole board into an inconspicuous soda can. Other recycled housing would be a plastic soap case, Vegemite jar, or hollowed out physics text-book. To mount the red LED's, drill through the plastic lenses of any sunglasses. Take them off first. If you buy the high intensity clear type, the focussing end MUST be filed flat for safe diffusion. NEVER apply other than a 9 volt transistor battery to this circuit.

SELF-EVOLUTION

Now that you've checked out our project, here are some ideas for its use from other researchers. Let's procede from the higher pulse rates downward. At the upper end, corresponding to our "normal" waking state, combined physical and mental activities are favoured, such as dealing with everyday practicalities.

You will see the most vibrant geometric patterns here, and slightly lower in the intricate area of concerted thought, reasoning or analysis. That was the so-called "Beta" range. Nothing special. More subtle levels follow, conducive to creative inspiration, learning and seeing things in novel ways. Then emerge pleasurable states of "non-directed alertness", or calm receptivity ... the beginning of intuition. As the level of mental "noise" diminishes, our liberated awareness attunes to higher dynamics, and the revitalising capacity of direct perception. Passing through this "Alpha" zone, we now enter "Theta", for deeper relaxation, meditation and spiritual ideals. The final is "Delta", home of dreamless sleep, trance and an elusive borderland of self-transcending experiences. Along the pathway are found these beneficial "key" frequencies, and others that may repel you. This is where personal sensitivity comes in. Find the balance between the machine controlling you, and you controlling the machine ... where there is finally no control at all.

Happy goggling!

